

Article

Information Seeking Behaviour in Electronic Environment: A Study of Engineering College Users in West Bengal

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A B S T R A C T

This research is concerned with the "Information seeking behaviour in Electronic Environment: A Study of Engineering Colleges Users in West Bengal." This analysis is based on the data composed through a questionnaire from Users of the Engineering College of West Bengal. This research deals with the analysis and interpretation of collected data by employing appropriate statistical tools and techniques wherever necessary. Data were composed by using a questionnaire from 3468 Respondents in Engineering Colleges of West Bengal.

Keywords: Electronic Environment, Engineering, Information

Introduction

The most important purpose of any library is to make accessible an efficient arrangement of print, non-print, and electronic resources to the users to meet their information requirements thoroughly. It is a fact that the information resources accessible in libraries be used systematically and thoroughly wherein educate the users from time to time is an important activity. Out of all, electronic resources are in performance an important role in information dissemination in up to date librarianship.

Therefore, there is a requirement to create a separate electronic resources collection Development policy to access, interface, technical support, and licensing. The growth of electronic resources is also multifold. The policies would help the Librarians decide on such electronic

resources that would be easily accessible and have no licensing problems etc.

An e-resource is a material that requires computer intervention to access its content and make it useful. Both online and offline resources such as CD ROMs fall within the scope of e- resources. The expression e-resource refers to all the products which a library provides from side to side of a computer network. The electronic resources are also familiar as online information resources covering bibliographic databases, electronic reference books, search engines for full-text books, and digital collections of data. They have both "born digital" materials which have been produced directly online. Example- E-journals, Databases, and print resources that have been scanned and digitized. The electronic resources, e-journals, online databases are not "owned" by the libraries as they own the print material.

The rights of electronic resources lie with the provider of these resources. Access to the electronic resources may be free via the Internet or maybe accessible against a fee. Some of the examples of E-resources are magazines, encyclopedia, newspapers, journals, or articles published in them. These may be accessed on Internet-related devices such as computers, tablets, smartphones, etc.

E-resources are quickly replacing print resources as the largest consumer of the library and information center. It is compulsory to estimate the usage of electronic resources and integrate the results into their decision making regarding the resource.

Information Seeking Behaviour

Information Seeking Behaviour is a preferred subject of research by Library and Information Science. Information Seeking Behaviour is an important part of user studies which studies the causal relationship between the user of information and the information system.

Information Seeking Behaviour is a broad term, which involves a set of actions that an individual takes to express information needs, seek information, evaluate and select information, and finally uses this information to satisfy his/her information needs. In the course of seeking new information, the individual may interact with different people, analog tools, and computer-based information systems.

Review of Literature

Reviews are Secret into Four Categories Namely

Information Seeking Behaviour

Wilson TD has introduces various factors that may determine the information-seeking behavior of an individual or a group of individuals.¹ Information seeking behavior involves personal reasons for seeking information, the kinds of information which are being sought, and the ways and sources with which needed information is being sought.²

Information seeking behavior is expressed in various forms, from reading printed material to research and experimentation. Scholars, students, and faculties actively seek current and more currently, electronic media. Abels E has mentioned that the frequency of use of the Internet in 1998-2000 had greatly increased. At the same time, expenditures on monographs showed a steady increase.³

Information seeking behavior is different from the actual information need. The information need is subjective. The relative concept in the mind of the experiencing individual and is defined as the recognition of the existence of uncertainty.⁴

Use of E-resources

- Asemi A, Riyahiniya N 5 conducted a survey on

awareness and use of digital resources in the libraries of Isfahan University of Medical Sciences, Iran. Results of the study are that 70% of students are aware of digital resources available in the university databases; 87.2% of students feel that the available digital resources meet their information needs. Authors conclude that users are facing some problems like low- speed connectivity and a shortage of inadequate hardware facilities.

- Beard J et al.⁶ brought the following significant findings: There was considerable growth in the use of E-resources by students of the Institute of Health and community studies The use of E-resources is more by the students of computer science and Electronics and Communication as revealed by nearly three fourth of the respondents The percentage for staff in the School of Conservation Sciences was 75 percent and for the School of Design, Engineering, and Computing 53 Percent concerning the use of E-resources.

Electronic Library use

- Appleton L⁷ used a case study in which staff and students at three separate education colleges encouraged themselves to explore and share their experiments of using Electronic Library Resources. The findings are limited to one case study, using the different colleges in the Mersyside area of the U.K. The specific evidence has resulted in several conclusions: (a) the use of Electronic Library Resources (ELR) is highly appropriate for many programmers' of study within Further Education College. (b) The use of Electronic Library Resources developed independent and autonomous learning within education students. (c) Electronic Library Resources can be used to inform teaching practice and lesson planning for further education tutors. Teaching staff and Library staff should collaborate to ensure that Electronic Library Resource teaching is placed into an appropriate subject context.
- A case study undertaken by Kumar OB, Reddy VS⁹ based on 3117 users community of NIT library, Warangal revealed an increasing use of the digital library services.

Selection of Electronic Resources

- Miller RH¹⁰ in his article titled "Electronic Resources and Academic Libraries, 1980-2000: Historical Perspective" described how collection is to be Developed in an electronic environment. Over the past twenty years, academic collection development specialists have dealt with dramatic changes, brought about by decreasing purchasing power and the growing importance of electronic resources. The collection managers have rethought their efforts and revised criteria for the selection of materials in new formats while also maintaining traditional collections.
- Davis M 11 discussed the evaluation of selection

activities for electronic resources in libraries. For the selection of non-book format, the criteria are given in two levels i.e. Content & Presentation & Format. For the selection of electronic resources, it is necessary to keep in mind the infrastructure access method, etc., besides the content and format of the product. Understanding the required technology is mandatory before going to electronic resources. In traditional selection criteria usually, requisition of Author, Publisher, and Producer are taken into account. Content is another criteria in traditional collection development for the acquisition of electronic resources. The author suggested considering access methods, archiving facility, licensing limitations, user delimitation, user capability and restrictions, and contractual obligations.

Objectives

The objectives of this study are as follows:

- To examine the types of information sources consulted by users in the engineering college of West Bengal.
- To determine the frequency of use of kind of information are used by engineering users for seeking information.
- To find the purpose and areas of information seeking of Engineering College users in West Bengal.

Delimitation of The Study (Scope)

In this research study, an attempt is made to identify the availability and growth of e- resources. Such a study helps to understand the use of these resources in engineering colleges of West Bengal. Availability has to be exploited optimally by the libraries for the benefit of the users. The study needs to be made to assess the provisions made by these colleges to provide access to these E-resources. It is also essential to study their impact on information service to the users to fulfill their needs. While studying the use it is also essential to understand and make plans for optimum use of these resources. The use also depends on many things like needed training for librarians, availability of infrastructure. As part of the access provided the necessary facilities have to be made.

The topic of the research study is "Information seeking behaviour in Electronic Environment: A Study of Engineering Colleges Users in West Bengal." to collect for this study, faculty members, research scholars, and Engineering College Users of West Bengal. The area of the study focused on approximately One Hundred Twenty Engineering Colleges of West Bengal. The geographical area of this study is confined only to West Bengal Engineering colleges. This study is related to the Information-seeking behaviour in Electronic Environment available information centers such as the Engineering College of West Bengal.

Research Methods and Methodology

Research methods are a significant one while collecting and analyzing the data in a method that aims to come together significance to the research function with the economy in the process. The present study is descriptive, analytical, and comparative. A researcher needs to see and pose a specific problem for research.

A design that is flexible, appropriate, efficient, and economical, minimize bias, and maximizes the reliability of data collected is considered a good design.

Required data for the present study has been collected from the Engineering College Library, Users (faculty members, research scholars, students) of the different colleges of West Bengal. The study was mainly based on the Primary and Secondary data collected from the Engineering College Library users through a well-designed questionnaire in the process of collecting the data. Engineering College libraries of academic institutions and their users (faculty members, research scholars, and students) have been interviewed personally with clarification of doubts in the questionnaire. The secondary data was collected from sources like textbooks, reference books, national and international journals, magazines, and College websites.

For the selection of Engineering College Libraries and Engineering College users (faculty members, research scholar, students) of engineering colleges of West Bengal, the proposed study used random sampling techniques.

The questionnaire was designed to collect the data and relevant information on various aspects of the "Information seeking behaviour in Electronic Environment: A Study of Engineering Colleges Users in West Bengal." The questionnaires were sent to the Engineering Colleges and their users (faculty members, research scholars, and students) of West Bengal. The questionnaires were not responded to within one month; they were given reminders and also pursued sending their responses. Finally, 66 Engineering colleges and 3468 users' duly filled questionnaires have been received back as per instruction. These questionnaires have been scrutinized and manipulated for tabulation and statistical analysis, where there were needed in the proposed study.

Results

Table I. Gender-Wise Respondents (Statistical Analysis)

S.No.	Gender	Library Respondents	Percentage
1.	Male	2148	32.54 %
2.	Female	1320	20 %
	Total	3468	52.54 %

Table 1 reveals that the Engineering College Libraries. Out of the 66 Engineering College Libraries respondents The Gender-wise distribution of the overall respondents reveals that, considering their gender, the majority are Male 2148 (32.54%) as female populace consists of 1320 (20%) only.

Table 2. Respondents Position

S.No.	Respondents Position	Library Respondents	Percentage
1.	Professor	156	0.044
2.	Asso. Professor	264	7.61
3.	Asst. Professor	320	9.22
4.	Student (UG)	2000	57.67
5.	Student (PG)	728	20.99
	Total	3468	100

Table 2 shows the designations of respondents, which are formal in higher and professional education, and from the above table, it can be seen that out of 3468 respondents 156 (0.044%) are Professor, 264 (7.61%) are Associate Professor, 320 (9.22%) is Assistant Professor, 2000 (57.67%) are Students (UG), 728 (20.99%) are Students (P.G.).

Table 3. Frequency of visits to the Library to access E-resources

S.No	Option	No. of Users	Percentage
1.	Daily	2226	64.18 %
2.	Twice a week	330	9.51 %
3.	Weekly	448	12.92%
4.	Fortnightly	168	4.84%
5.	Monthly	196	5.65 %
6.	Occasionally	100	2.90 %
	Total	3468	100

E-resources Use in the Engineering College Library

Table 3 depicts that clear 2426 (64.18%) out of 3468 respondents visit their college library daily to access E-resources, 330 (9.51%) visit their library Twice a week, 448 (12.92%) visit their library weekly, 168 (4.84%) visit their library fortnightly, 196 (5.65%) visit their library monthly and 100 (2.90%) visit their library occasionally when the need arises to access E- resources from the Library.

Table 4. Average Times Spent in using The Library e-Resources

S.No	Time Spent in The Library	No. of Users	Percentage
1.	One Hour	1725	49.74 %
2.	Two Hour	1328	38.29 %

3.	More than Two Hours	415	11.96%
	Total	3468	100

Table 4 stated that 1725 (49.74%) out of 3468 respondents spent only one hour in their library to use resources and it might be presumed to browse and scan the reading materials only. It is found that 1328 (38.29%) and 415 (11.96%) spent Two hours and more than Two Hours using E-resources in their college Library.

Table 5. Level of Awareness of using E-resources

S.No	Option	No. of Users	Percentage
1.	Excellent	1459	42.07 %
2.	Good	1195	34.45 %
3.	Fair	473	13.63%
4.	Poor	194	5.60%
5.	Very Poor	147	4.25 %
	Total	3468	100

Table 5 indicates the level of awareness of using E-resources towards Library Users among the Respondents Level of Awareness is Excellent [1459 (42.07%)], Respondents Level of Awareness is Good [1195 (34.45%)], Respondents Level of Awareness is Fair [473 (13.63%)], Respondents Level of Awareness is Poor [194 (5.60%)] and Respondents Level of Awareness is very poor [147 (4.25%)] related to using E-resources from Engineering College Library in West Bengal.

Table 6. Aware about E-resources

S. No	Option	No. of Users	Percentage
1.	Yes	2961	85.38%
2.	No	507	14.61%
	Total	3468	100

Table 6 indicates the awareness about E-resources towards Library Users among the 2961 (85.38%) Respondents Aware about E-resources from Engineering College Library in West Bengal and 507 (14.61%) Respondents are not aware of E-resources.

Table 7. Search Interfaces used by Respondents to Locate E-resources

S.No	Option	No. of Users	Percentage
1.	Search Engines	119	3.44%
2.	Library Website	2725	78.57 %
3.	Have information on all useful sites	624	17.99%
	Total	3468	100

It can be seen from the above Table 7 that 119 (3.44%) respondents working and study in engineering college under the study area use search engines to locate E-resources, while 2725 (78.57%) use library websites and 624 (17.99%) Respondents use other useful sites to locate E-resources. The respondents are either not familiar with search formulations or other alternative search methods.

Table 8.Places for use of E-resources

S.No	Option	No. of Users	Percentage
1.	Department	188	5.42 %
2.	Library	530	15.28 %
3.	Home	1250	36.04 %
4.	Hostel	1130	32.58 %
5.	R&D Centre	200	5.76 %
6.	Browsing Centre	150	4.32%
7.	Any Other	20	0.57 %
	Total	3468	100%

Table 8 reveals that about 188 (5.42%) respondents using Search e-Resource in Department, 530(15.28%) respondents using Search e-Resource in Library, 1250 (36.04%) respondents using Search e-Resource in Home, 1130 (32.58%) respondents using Search E-Resource in Hostel, 200 (5.76%) respondents using Search E-Resource in R&D Centre, 150 (4.32%) respondents using Search E-resources in Browsing Centre and 20 (0.57%) respondents using Search e-Resource any other.

Table 9.Awareness about Their Library Subscribing for E-resources Portal

S.No	Option	No. of Users	Percentage
1.	Yes	2760	79.58 %
2.	No	708	20.42 %
	Total	3468	100

Table 9 depicts that 2760 (79.58%) out of 3468 respondents are aware that their college library subscribes to the E-resources portal, while 708 (20.42%) Respondents are not aware that their college library is subscribing to the E-resources portal. It is quite encouraging and satisfactory.

Table 10.Keep Abreast of Current Developments in Engineering Field

S. No	Option	No. Of Users	Percentage
1.	Referring to current issues of journals	1040	30.00%
2.	Referring abstracting/ Indexing journals	590	17.03%

3.	Personal communication (with Staff and colleagues)	740	21.33 %
4.	Attending Conferences/ Seminars/ Workshops	551	15.88%
5.	Subscribing to Electronic Discussion Group	435	12.54%
6.	Other	112	3.22%
	Total	3468	100

Table 10 depicts that 1040 (30.00%) out of the 3468 respondents working as teachers and research scholars in the engineering colleges of the study region, i.e. West Bengal, of Engineering college refer to journals to keep abreast of current developments in their fields. The next method is referring abstracting/ Indexing journals 590 (17.03%) respondents, 740 (21.33%) use personal communication, and the remaining, 551 (15.88%) attending Conference/ Seminar/Workshop, 435 (12.54%) use subscribing to Electronic discussion and 112 (3.22%) use other services to keep abreast of current developments in their fields.

Table 11.Purpose Use E-resources in Engineering Library

S.No	Option	No. of Users	Percentage
1.	Studying	1441	41.55 %
2.	Publishing Research Article	560	16.15 %
3.	Research/ Project	652	18.80 %
4.	Exchange of Idea	225	6.50 %
5.	Teaching/Guide	269	7.75 %
6.	Other	321	9.25 %
	Total	3468	100 %

Every student has a different purpose for using E-resources, Table 11, highlights the major purpose of using E-resources, Respondents have to Study for their daily informational needs so a ratio of 1441 (41.55%) use E-resources for Studying, 560 (16.15%) use E-resources for Publishing Research Article and among which 652(18.80%) respondents are involved in research, Project, 225(6.50%) respondents use E-resources Exchange of Idea, 269(7.75%) respondents use E-resources Teaching/ Guide and 321(9.25%) respondents use E-resources any other purpose.

Table 12.Types of E-resources use in Engineering Library

S. No	Option	No. of Users	Percentage
1.	Website	679	19.57 %
2.	e-Journal	551	15.88 %
3.	e-Books	726	20.93%
4.	Online database	1125	32.43%
5.	CD-ROM Database	143	4.13%
6.	OPAC	94	2.71 %
7.	Other	150	4.35 %
	Total	3468	100

Students use a different type of Electronic Resources (ER) to satisfy their Informational needs (Table 12). A large ratio 1125 (32.43%) of respondents use Online Database, 679 (19.57%) respondents use Website, 551 (15.88%) respondents use E-Journal, 726 (20.93%) respondents use E-Books, 143 (4.13%) respondents use CD-ROM Database, 94 (2.71%) respondents use OPAC and 150 (4.35%) respondents use other Type of E-resources.

Table 13.Method Access The E-resources

S.No	Option	No. of Users	Percentage
1.	Trial and error method	472	13.62 %
2.	Suggestions from friend and colleagues	1370	39.50 %
3.	Guidance from the Library Staff	467	13.46 %
4.	Self instructions	389	11.22 %
5.	Attending Workshop, Training Programs	470	13.55 %
6.	Other	300	8.65%
	Total	3468	100

It can be seen from the above Table 13 that 472 (13.62%) out of 3468 respondents access E- resources by Trial and error method, 1370 (39.50%) respondents take suggestions from friends and colleagues to access E-resources, 467 (13.46%) respondents take the help and guidance from the Library staff to access E-resources, 389 (11.22%) respondents self instructions to access E-resources, 470 (13.55%) respondents have learned from training programs and workshops, while 300 (8.65%) respondents use other methods to access E- resources.

Table 14.Preference to Read The Retrieved Information (Ex. Journal/ Article)

S. No.	Option	No. Of User	Percentage
1.	Print (Hard Copy) only	1150	33.16 %
2.	Electronic (Computer) only	1045	30.14 %
3.	Both	1273	36.70 %
	Total	3468	100

It can be observed from Table 14 that 1150 (33.16%) out of 3468 respondents prefer to read print and 1045 (30.14%) respondents prefer to read only the electronic version and 1273(36.70%) respondents prefer to read both print as well as the electronic sources of information retrieved.

Table 15.Problems Faced While Accessing the E-resources

S.No.	Option	No. of Users	Percentage
1.	Lack of availability of computer terminals	292	8.41%
2.	Lack of information about how to use e-Resources	1799	51.88%
3.	Lack of self-helping guides	677	19.54 %
4.	Lack of support from the Library Staff	455	13.11%
5.	Others	245	7.06%
	Total	3468	100

It can be seen from Table 15 that 292 (8.41%) out of 3468 respondents in engineering colleges face the problem of lack of availability of computer terminals in their library when they want to access E-resources,1799 (51.88%) respondents feel that there is no information on the use of E-resources in their library, 677 (19.54%) respondents feel that there are no self-helping guides in their library to access E-resources, 455 (13.11%) respondents fell that enough supports are not coming from the library staffs of their colleges in accessing E-resources.

Conclusion

The study safely concluded that the trend in Information-seeking behaviour in Electronic Environment (E-resources) among the students is found common.Students are well responsive to their educational needs. They fulfill their

needs through the use of E-resources in an Electronic Environment daily. Irregular power supply and slow connection are found as the major barriers in getting access to the E-resources for students. The reason for these problems is power be the place from where the students usually use E-resources, Although several students (Users) use essential searching to find their desired and relevant information they are extremely satisfied with the retrieved information. Results of this survey also exposed the estimation about the advantages and disadvantages of E-resources. Students are satisfied because according to them E-resources are easily available, helpful for their studies, time-saving, and provides updated information on a single server just a click away. But everybody has dissimilar perception so some students think the accurate opposite of this compensation and they stated that information on E-resources is not genuine, it is time-consuming, it has limited information and E-resources is a major reason of eye sightedness, laziness and less usage of printed material.

Also, the results of this study established that the majority of students didn't get any training related to Electronic Environment but they are not enthusiastic to get trained. Some of them are enthusiastic to get trained for some precise contents like to enhance their searching skills and for using E-resources in a better way.

Engineering Respondents use a variety of widely distributed approaches to complete their information needs. Today Information technology has developed quickly and has a great influence on access to information and information-seeking behaviour. The study aimed to determine, the information need and Information-seeking behaviour of Engineering Respondents to investigate their motive for seeking information and to study and determine their awareness concerning various channels of information.

Suggestions

The study of the Information-seeking behaviour in Electronic Environment: A Study of Engineering Colleges Users in West Bengal has shed some light on the points which require serious awareness, to enable sources to meet their information.

- User training is necessary for the improved use of electronic resources in the library given that a good number of users are searching electronic literature on their own
- Electronic resource users should be trained about advanced search strategies and the use of controlled vocabulary to make the electronic search process much easier
- Also, since users are experience problems in Gathering information, the most appropriate measures should be taken to overcome this, such as increasing the number of Terminals and printers
- An electronic document delivery should also be introduced into the library at the initial opportunity. The library management, therefore, needs to behaviour user study programs to know more about the electronic resource needs of users
- The library should be equipped with adequate computers for internet surfing and keeping update with journals which make available them innovative knowledge, research, and keep updates for improving teaching schedules and styles.
- Every one Engineering college and its related libraries should be connected through the internet
- The library should be updated with advanced technologies
- Update the library collections and provide internet facilities and extend the time duration of the library
- Library staff should be skilled with innovative technologies
- More sufficient access to online data
- A better system of access, to the sources of information in the field of Engineering College

References

1. Wilson TD. Human Information behavior. *Information Science* 2000; 3(2): 49-55.
2. Leckie GJ, Pettigrew KE, Sylvain C. Modeling the information seeking of professionals: A General Model Derived from Research on Engineers, Health Care Professionals and lawyers. *Library Quarterly* 1996; 66(2): 161-193.
3. Abels E. Information Seekers' Perspectives of Libraries and Librarians. *Advances in Librarianship* 2004; 28(1): 151-170.
4. Krikelas J. Information-Seeking Behavior: Patterns and Concepts. *Drexel Library Quarterly* 1981; 19(5): 5.
5. Asemi A, Riyahiniya N. Awareness and use of digital resources in the libraries of Isfahan University of Medical Sciences. *The Electronic Library* 2007; 25(3): 316-327.
6. Beard J, Dale P Hutchins J. The impact of E-resources at Bournemouth University 2004/2006. *Performance Measurement and Metrics* 2007; 8(1): 7-17.
7. Appleton L. Perceptions of Electronic Library: Library resources in further education. *Electronic Library* 2006; 24(5): 619-634.
8. Jharotia AK, Prasad D, Singh SP. Usage of e-resources in management colleges of Delhi NCR: A Study, Vidyawarta. *Interdisciplinary Multilingual Refereed Journal* 2018; 23(5): 54-60.
9. Kumar OB, Reddy VS. Digital library use: a Case study of NIT Library, Warangal. *ILA Bulletin* 2003; 39(2): 40-45.
10. Miller RH. Electronic Resources and Academic Libraries, 1980-2000: A Historical Perspective. *Library Trends*

2000; 48(4): 645-670.

11. Davis M, Donald G Jr. Librarianship and library science in India, Concept Publishing Company, *New Delhi* 2001; 108.
12. Rajawat K. Information Seeking Behavior of Users of Pharmacy Colleges in Rajasthan. *PEARL-A Journal of Library and Information Science* 2019; 13(3): 263-268.
13. Rajawat K, Neetu G. Information Seeking Behavior of Users of Engineering College Special Reference to Shekhawati Area in Rajasthan. *J Adv Res Lib Inform Sci* 2019; 6(3): 1-6.
14. Rajawat K, Kadam, Anil J. Information Seeking Behaviour in Electronic Environment: A Study in Medical College of Maharashtra. *International Conference on Social Science and Humanities ICSSH-2020*.